Sustainable Industrial Policy - Building on the Ecodesign Directive - Energy-using Product Group Analysis/2

Lot 5: Machine tools and related machinery

Minutes – 2nd Stakeholder Meeting

Venue: **Centre Albert Borschette**
Room 2B
rue Froissart, 36
1040 – Bruxelles

Date: March 28, 2011 (10 a.m. – 5.30 p.m.)

These minutes are an abridged, summarised version of statements, questions and comments. It is not a direct transcription of what was said, but Fraunhofer checked based on the recordings of the meeting, that statements are summarised correctly.

10:00 Welcome ***M. Eifel***
10:05 Introduction of Agenda ***K. Schischke***
Presentation is posted at:
http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/Intro_2nd%20StakeholderMeeting.pdf

10:10 Presentation Changes Task 1 Report ***E. Hohwieler/ S. Kreuschner***
Presentation is posted at:
http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/Task1_2nd%20Stakeholdermeeting.pdf

10:40 Discussion on Task 1

Mr. Horvat (EUROMAP): There is a separate chapter for plastic and rubbery machines. At the end there is the comment that rubber machines are no machine tools. However, on a modular level, it is mentioned that they are in the scope. What does that mean for our industry?

Mr. Schischke (Fraunhofer IZM): On slide 12 (*presentation on task 1*), plastics and rubbery machines are not considered as machine tools (green boxes), but certain modules

(drive parts, etc.) are similar to the ones that are included in machine tools to a certain extent. Accordingly, they might be in the scope.

Mr. Celata (EUROMAP): There are several machines having modules such as those in machine tools. First they are excluded, then again mentioned as part of the scope later in the report. Please specify the differences.

Mr. Schischke (Fraunhofer IZM): If modules of machine tools are used for other kind of machineries, then we will address the related improvement potential as well. That might be slightly confusing, but no contradiction to the approach of the study.

Mr. Horvat (EUROMAP): On a modular level, there is no possibility to make comparisons with machine tools. It's primary shaping, which is excluded. Plastics and rubber machines are processing machines and can't be compared with machine tools.

Ms. Reis (ECOS): As far as press brakes are concerned, there is a modular similarity.

Mr. Horvat (EUROMAP): Same technology in this case, but if you change the specific function or product to be proceeded, it changes the energy consumption. This case is not comparable.

Mr. Schischke (Fraunhofer IZM): it is explicitly said, that plastics and rubber machines are different than what we see in metal working machine tools. So we don't focus on the unit. If you talk about the drive, hydraulic, etc., there are similarities. Please compare with task 5, whether the energy saving measures stated there are applicable to plastics and rubber machines.

Mr. Celata (EUROMAP): We have started our own plastics and rubber machine study; please don't mix it up with other machines. The big quantity of energy consumption is a result of the plasticization, which is a primary shaping process.

Mr. Würz (VDW): Since we introduced the modular approach right at the beginning *(SRI)*, there is some clarification needed here. We started with a functional modularity. What you do is reduce the functional approach to a physical approach. The functional module is disregarded. Accordingly, this opens you the wide field to other machines. We don't mean physical modules.

Mr. Früauf (VDMA): I'm supporting Mr. Würz opinion with an example of the automotive industry for a module: Operator panel. It consists of a control unit, hardware, and software. The elements together should be seen as a module. But the software is the key for energy consumption. If you program that module for a machine tool, you might

still have the physical module itself, but with different effects. If you try to transfer it from a machine tool to another, it changes into another module.

Mr. Gerczyński (CECIMO): You state a total energy consumption for machine tools on page 50. Do you know, how this correlates to the overall EU energy consumption?

Mr. Schischke (Fraunhofer IZM): Not able to answer at the moment.

Mr. Eifel (EC): No data at hand, but for comparison the first 11 adopted implementing measures are estimated to allow annual savings of 222 TWh by 2020. Regarding the total industrial energy consumption the EC has not gone into all the industrial processes. For furnaces and ovens it is the parallel lot 4, but no total figures at hand.

Mr. Gerczyński (CECIMO): The total mechanical engineering sector consumed in 2008 164 TWh which is less then what the report states for metal working machine tools alone.

Mr. Schischke (Fraunhofer IZM): This of course would be a contradiction. Please share the calculation with us.

Mr. Gerczyński (CECIMO): You mentioned something around 2 – 3 million machine tools. In the second task, there is something about 3-4 million units.

Mr. Schischke (Fraunhofer IZM): For clarification, the aim of task 1 is giving a rough estimation that is refined in task 2. No updates of the screening in task 1 are intended if new insights are revealed in the later tasks, as this would mean, we refine the screening in task 1 constantly and make it match with the later findings. In the later steps of the study, please forget about the rough estimate. This distinction could not be made at this point of the study.

Mr. Gerczyński (CECIMO): Finally you end up with a number of CNC machines. Those machines will be included in the screening. Are they handled differently than non-CNC?

Mr. Schischke (Fraunhofer IZM): The screening is a mix of CNC and non-CNC. Details will come up later in the study. This table is a first estimation for the upcoming tasks. Do not refer to this when refined data are published in later tasks.

Mr. Würz (VDW): Even if it is only estimation, for the screening, good scientific work requires cross checking with available data. The study in many places lacks cross checking with available data.

Mr. Schischke (Fraunhofer IZM): CNC and non-CNC distinction at this point in task 1 was not intended. The screening can now be ignored, but it was required to be carried

out at this point of the study. The process is iterative and new insights are taken into account during the process.

Mr. Würz (VDW): However, there should be a plausibility check, if necessary. It would be good practice to see whether it is plausible or not.

Mr. Schischke (Fraunhofer IZM): It is plausible. Even after thorough PRODCOM revision and taking into account the lifetime of machine tools, there remains a huge variation. At that point, we cannot be much more precise.

Mr. Eifel (EC): Plausibility check and the plausible assumption are analyzed by dialogues with *stakeholders*. First, assumptions are made, and then stakeholders are expected to verify and indicate necessary corrections.

Mr. Schischke (Fraunhofer IZM): Other point: Don't take the screening too serious, it is only indicative to see the course of the study. Minor quantitative discrepancies don't matter at this point. For policy making, it is not the purpose of the screening to be the only source.

11:00 Status Report ISO TC 39/WG12 ***D. Hagemann***

Presentation is posted at:
http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/Statusreport_ISOWG12_28032011.pdf

Mr. Schischke (Fraunhofer IZM): Workflow starts with lifecycle assessment. What is the entry point for this, should it be done individually for each machine tool?

Mr. Hagemann (VDW): If energy consumption is not the important factor for your machine tool, you have to find other criteria to analyse the environmental footprint.

Ms. Reis (ECOS): At the end, it seems that you have general, specific requirements as well as standards. Is there any interference among the approaches?

Mr. Hagemann (VDW): We support the self regulation process. The standard we develop is supporting the process. Policy decided to have a study in parallel.

Mr. Eifel (EC): The background to the preparatory study had already been extensively discussed at the first stakeholder meeting: The study preparing the Commission's Working Plan identified machine tools as one of the priority products and they were included in the draft Working Plan approved by the Consultation Forum on 28 May 2008 and adopted by the Commission on 21 October 2008. In May 2009 CECIMO first

presented the possibility of developing a voluntary agreement to the Commission. As the Commission had already adopted its decision to make a study on machine tools (with a wider scope than the voluntary agreement initiative) and the success of the voluntary agreement could not be guaranteed it was not possible to stop the product group study. However,it was decided to run the study in parallel with the development of the voluntary agreement with the intention that they support each other. The outcome of the recommendations of the study is completely open at this moment. Based on MEEuP-analysis, market information, use patterns, standardisation, the voluntary agreement project, etc. the possibilities are examined and a recommendation to the Commission will be made. The SRI has to be taken seriously into account and the policy recommendation might be to rely on the SRI. I hope both sides can go on to exchange data and go on with good work. This product (*machine tools*) is quite complex and a challenge. The mutual approaches might be supportive.

Mr. Heisenberg (Trumpf): If we understand the standard correctly, machines using more energy but using less energy per part would not be judged correctly. This should be taken into account when speaking of energy consumption and energy efficiency.

Mr. Hagemann (VDW): If I remember it right, when machines tools have been addressed, I tried to explain that energy per part could be a relevant figure for measuring the improvement. In the audience, no one was following this idea. With this standard, with the SRI, the machine tool manufacturer quantifies for himself which measures to pick up in a certain period of time. The standard supports the manufacturer to do it right.

Mr. Schischke (Fraunhofer IZM): By the way, the comment is also valid for our study. Our focus addresses the machine tool as such, not the individual part processed yet, as this is a somewhat different perspective. It is intended to take this aspect into consideration.

11:15 / 11:34 Presentation Changes Task 2 Report *K. Schischke*
Presentation is posted at:
http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/Task2_2nd%20Stakeholdermeeting.pdf

11:30/11:55 Discussion on Task 2

Mr. Gerczyński (CECIMO): There is an improvement in terms of numbers (*compared to Draft 1*), but the total number of 4.5 million units in Europe is still overestimated. Only one study we made available is included, though three studies were provided from our side.

Mr. Schischke (Fraunhofer IZM): Studies were used to verify the data outcome. Numbers are always related to a certain extent of uncertainty, but now represent a satisfying level of accuracy for the purpose of this study.

Mr. Gerczyński (CECIMO): The other studies are of a higher relevance and are more precise. It is important to consider these studies as well.

Mr. Schischke (Fraunhofer IZM): The problem is that country statistics are somewhat a snapshot of a certain situation (late 1990s in case of the French study provided). We don't have that for later years on a comprehensive level. It is difficult to extrapolate from snapshots – individual countries, individual years. The PRODCOM plausibility check etc. is a more comprehensive data basis (although not necessarily more correct). The French numbers are not too different to what we see here.

Mr. Hagemann (VDW): What is the idea behind the stock model?

Mr. Schischke (Fraunhofer IZM): The intention is to estimate: What is the current impact of machine tools on the EU27 level? Accordingly, these numbers become important with the base case assessments. At that point, results can be extrapolated, to find out what the total environmental impact of the installed stock is. The significance of improvement potential can be identified by means of the stock model data. The aim is to have a better idea of the consequences and impacts of certain measures to be taken.

Mr. Eifel (EC): Confirmed that robust data on stock and stock projection is needed for estimating the impact of measures, including voluntary agreements.

Mr. Gerczyński (CECIMO): For the stock model, do you see any dynamics, don't you think there is a replacement of non-NC by NC?

Mr. Schischke (Fraunhofer IZM): You are right, this would be our expectation as well, but the stock model does not confirm this trend for the recent past in terms of units, and we don't have any other prognosis instrument to forecast until 2025. We extrapolating from historic developments here.

Mr. Gerczyński (CECIMO): There are significant differences between NC and non-NC machines, but you don't make this difference? You are talking only about the 4.5 million metal working machines in total?

Mr. Schischke (Fraunhofer IZM): We make a distinction: 850.000 CNC machine tools and a total of 1.5 million rather large metal working machine tools, and a grey area of

3 million units of rather smaller units, which are not NC. See the base cases for the distinction made for the environmental assessments.

Mr. Gerczyński (CECIMO): Will you draw conclusions separately for NC and non-NC?

Mr. Schischke (Fraunhofer IZM): yes.

11:45/12:07 Presentation Changes Task 3 Report *J. König*

Presentation is posted at:
http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/Task3_2nd%20Stakeholdermeeting.pdf

12:07/12:22 Discussion on Task 3

Mr. Würz (VDW): You say: 55% of customers are automobile manufacturers and suppliers. Does that stand for Germany? Or Europe? Is it in terms of the production share?

Mr. König (Fraunhofer): It is the number of the German market in terms of number of customers as stated by Kuhrke.

Mr. Würz (VDW): You mean the number of manufacturers and suppliers of the automotive industry purchasing machine tools?

Mr. König (Fraunhofer): Yes.

Mr. Bianchi (Institute for Industrial Technologies and Automation - CNR): Unfortunately, energy efficiency has low financial benefits. Customers say that energy consumption is important, but it is a very minor share of machine related costs. Energy consumption will be changed by standardization. It is important to increase awareness among the machine tool users.

Mr. Waltl (PSI Global): There is no fundamental interest in energy saving as long as no fundamental benefit is given.

Mr. König (Fraunhofer): LCA and TCO concepts will be supportive to raise eco awareness.

Mr. Gerczyński (CECIMO): What is your estimation regarding the share of the electricity consumption assigned to machine tools out of the total factory electricity consumption in the automotive industry?

Mr. König (Fraunhofer): Estimate is about 20%

Mr. Hagemann (VDW): Concerning environmental issues in industry: Several companies already adapted specification in their manuals. Suppliers are forced to provide data. Eco awareness is on a good way.

Mr. Schischke (Fraunhofer IZM): How detailed are the requirements? Are they really supporting energy efficiency in the machines?

Mr. Hagemann (VDW): Regarding the supply chain, there is awareness regarding energy consumption, even SMEs look at energy efficiency when making investment decisions. It would doubt that there is no awareness in industry.

Mr. Schischke (Fraunhofer IZM): What is the effect on machine tools?

Mr. Hagemann (VDW): The approach for improvement in the automotive industry is as follows: 1. Optimizing infrastructure of production facility. 2. Organization within the facility. 3. New investment for new production lines and there is the specification for reduction of auxiliaries and it might become part of the TCO agreement, which you have to fulfill.

Ms. Reis (ECOS): Should we expect that only the automotive industry makes these attempts or should we rather approach this issue all together?

Mr. Hagemann (VDW): However, the automotive industry is a driving force. The rest will follow.

Mr. Bianchi (Institute for Industrial Technologies and Automation - CNR): Today machine tool builders often approach energy efficiency considering only its impact, usually quite limited, on the hourly machine cost. For the time being few customers, e.g. in the automotive sector, consider the environmental impact as an independent performance while selecting new machines. A stronger involvement of machine manufactures will result if energy efficiency will be prescribed by regulation.

13:15/13:38 Presentation Task 4 Report ***J. König***

Presentation is posted at:
http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/Task4_2nd%20Stakeholdermeeting.pdf

14:00 /14:27 Discussion on Task 4

Mr. Annacondia (UCIMU): Concerning the life cycle stages of the machine – many aspects are not under control of the machine itself (such as manufacturing). Are you sure that some aspects are not taken into account twice?

Mr. Schischke (Fraunhofer IZM): Taken into account twice: no. No double counting. Sourcing of material: Does the manufacturer have power of that? Yes. Similar: Efficient motor: Both supplier and manufacturer have to follow the regulation.

Mr. Annacondia (UCIMU): It is problematic for the manufacturer that if regulation is taking place, a lot of aspects are not under control of a machinery manufacturer, but its supplier.

Mr. Schischke (Fraunhofer IZM): Possible measures are subject to later tasks, especially task 7. There it will be discussed whether the measure is bearable for the machine tool manufacturer. It will be tested against feasibility and effectiveness. Possible measures will be tested concerning problems which go along with that (recyclability (CFK vs. Aluminium), etc.).

Mr. Würz (VDW): Computers have the same “impact” (energy related) as TVs as shown in the presentation. It should be questioned whether a comparison is possible at all. The functional unit is easier to define for TVs. The selected base cases are totally arbitrary chosen machines whose results cannot be extrapolated for the whole market and other machines. Field research is necessary. Other machines as base case assessments would cause totally different results. More reliable analysis is needed. In the computer example: are there also CNC computers used?

Mr. Schischke (Fraunhofer IZM): No.

Mr. König (Fraunhofer): The data from CECIMO was very helpful. Thus, we would appreciate to get further input from the stakeholders, especially for non-CNC machines and wood working machines. There are different materials used in machine tools.

Mr. Würz (VDW): The problem is presenting absolute numbers in values. You can scale them up and down depending on your examples. That is arbitrary.

Mr. Schischke (Fraunhofer IZM): Due to capacity reasons, the number of base cases has to be limited to a certain number of examples. In this regard, input from the stakeholders is appreciated. Without that, we have to use the data we have so far.

Ms. Reis (ECOS): About dismantling, the person who buys it is responsible. Also the manufacturer is responsible to provide easy ways of dismantling. Secondly, composite materials can have heavier loading in the ecological profile. In our institute, LCA considerations are incorporated before creating a product.

Mr. Dürer (VDMA): The problem with comparison: Computers are easy to compare with other computers. When talking about machine tools, you have thousands of them. In the study, it has to be emphasized that base cases cannot be found, because no transferable data can be achieved. The base case for the press brake is very special and it is difficult to extrapolate these results.

Ms. Garczynska (CECIMO): More examples on base cases are needed. Your base cases have changed and we haven't been informed. Data acquisition is difficult for the manufacturer. Base cases are critical in regard to operation modes. They have to be regarded more in detail. CECIMO will communicate the functional modules as they stand today.

Mr. Roosen (Parker Hannifin GmbH): Concerning the press brake base case: Difficult to take this one press brake to represent the complete range on the market. Regarding the power consumption in the use phase, it is important to distinguish the power consumption according to the scale.

Mr. Schischke (Fraunhofer IZM): We are not in the position to make several base cases for press brakes. That is not possible for the study. The base case approach is a compromise of feasiblity and reality. As stated before, there is no possibility to say base cases are not transferable, otherwise the study would end. Later on, we are ready to take criticism regarding transfedrability / extzrapolation of any findings and will take it into account. Then it is up to the policy maker what to do with these limitations.

Mr. Siderius (SenterNovem): Regarding the base cases: In every other product study, it is said that you can't represent the market with a couple of base cases, e.g. computers. Nevertheless, there are a number of regulations which are based on the same methodology as in this case. Base cases are an abstraction of reality: there is no 100% match with reality. But the base case is realistic enough to discuss improvement options. To support eco design, we want to see efficient improvement measures and want to discuss improvement options. It is better to concentrate on a number of base cases and to avoid talking about details. The number of base cases chosen here seems reasonable. If necessary, you could add base cases, but it would increase complexity.

Mr. Würz (VDW): No problem to see a machining centre as a representative. However, doing a field research is not too difficult to realize, to gain an idea about the distribution of types of machine tools. Thus, a sound and feasible methodology has to be presented first.

Mr. Steigerwald (Bosch Rexroth AG): Hydraulic oil is not a consumable. It works in a closed system, you need to change it in a certain period, but it is also possible to have

life time filling, depending on condition, stress level, etc. So it is not a consumable like lubrication.

Mr. König (Fraunhofer): We discussed that with a partner. The oil has a lifetime, having certain particles in it; therefore it is easier to replace it after a while. The remark will be considered in the comments.

Mr. Waltl (PSI Global): It is of no use to discuss numbers in details. Finding decisions and going along with subsequent tasks should be priority.

Mr. Schischke (Fraunhofer IZM): Our aim is to find something in the middle between the extremes. Therefore, "typicial" machine tools should be tackled.

Mr. Falkner (CLASP): Regarding industrial pumps, we had the same difficulties over defining the base cases. We went for a small and a big one of each. We worried how those base cases fit in the universe of possible pumps. When we were done, we did a top down check. Then it is very robust and can be scaled up for other machines.

Mr. Eifel (EC): If there are concerns on the reliability of the base cases, further data should be provided. Stakeholders have a strong interest to get it right. The focus should be on the products with the biggest potential.

15:00/15:32 Presentation Task 5 Report ***J. König***

Presentation is posted at:
http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/Task5_2nd%20Stakeholdermeeting.pdf

15:30 / 16:10 Discussion on Task 5

Mr. Cloarec (CETOP): A position paper regarding environmental topics on hydraulics and pneumatics will be drafted and submitted by mid-June.

Mr. Siderius (NL Agency): One remark: Almost all BATs, BNATs are from Germany. Regarding having a European directive, it should be possible to have some examples of other manufacturers from other parts of Europe.

Mr. Grandjean (REDEX): Concerning high precision transmission system: the best technology for main drives and feed drives are mixed technologies (mechatronics). We should be careful about the prejudices for electrical systems. Direct drives can be very

inefficient depending on the stroke, etc. This part of the document can be improved from our side.

Mr. Annacondia (UCIMU): We recommend splitting up the solutions into implemented by components (better motors, etc.) on one side, and on the other side those which need a redesign of the machine. Reason: The former are easier to implement. Accordingly, please split the chapter or the appendix. At the end of chapter, you can list producers. This can be preceded also in cooperation with us.

Ms. Garczynska (CECIMO):The table 5.1 is missing information for certain modules, as well as the source is missing.

Mr. Schischke (Fraunhofer IZM): It is an overview of facts and figures which are discussed later in detail in the task report. Also sources are provided in these later parts.

Mr. Waltl (PSI global): Designers should be passionately encouraged to take into account these measures. Single measures should not be discussed too much in detail. There is the risk, that measures addressing individual measures and leading e.g. to technology bans could result in system solutions, which are not the most efficient ones.

Mr. Schischke (Fraunhofer IZM): The question of the appropriateness will be subject to task 7: Policy making and impact analysis. This is not part of task 5. Firstly, there is a technical analysis: What is technically possible? Secondly, we think about possible measures.

Mr. Eifel (EC): To see what available realistic options are will be looked at in tasks 6 and 7. Thus, we should not talk about picking technologies. Task 5 basically deals with identifying fundamental BATs and BNATs.

Mr. Würz (VDW): How to differentiate between BATs and BNATs? There were 7 year old projects introduced as BNATs (*on page 62)*. You state that thermal compensation is a BAT, although there is a lot of ongoing research. Right now it is a basic topic in CIRP research.

Mr. König (Fraunhofer): That machine which has been examined in a research project a while ago is not on the market. Availability is a major criterion.

Mr. Würz (VDW): You should not advertise single machines.

Mr. Hagemann (VDW): Replacing inverter units: It should be the other way around as it is stated (*200V to 400V instead of 400V to 200V)*. Currently it is presented the wrong way in the report.

Mr. König (Fraunhofer): Will be adapted.

Mr. Annacondia (UCIMU): What is the BAT behind the solution introduced in slide 20?

Mr. König (Fraunhofer): Example of combining two different single solutions for an overall efficiency raise. This product is available on the market currently. On the one hand you can do a combination with laser and turning, on the other hand you can use milling and laser.

Mr. Annacondia (UCIMU): We should be careful to combine certain single efficiency measures.

Mr. Hagemann (VDW): Concerning table 5-4: There should be a note when results from the research projects will be available, for those which do not know the details.

Mr. Dürer (VDMA): A general question: For certain technologies, single product names were mentioned, but not all which are available. It is a good advertising for certain companies.

Mr. König (Fraunhofer): We do not support any advertising for single companies. So far, there is a focus on German companies. Intention was to clean up and give high density of BATs.

Mr. Schischke (Fraunhofer IZM): It partly eases the reading when it is clear where the information comes from and on which claim it is based. If any company provides additional data, it will be noted and mentioned as a footnote.

Mr. Dürer (VDMA): As a footnote alright, but not mentioning one single product which you can buy in the shop.

Mr. Annacondia (UCIMU): An annex with companies offering certain products would be helpful. The document with companies listed can be updated once a while, which shouldn't be a big effort.

Mr. Waltl (PSI global): It certainly doesn't need a company's name in the text. We are capable of finding any product on the web, which is described adequately. As long as the data is validated you can eliminate trade names etc. If you refer to a specific product you warrant for the correctness of the data.

Mr. Schischke (Fraunhofer IZM): I do not see it like this. If we state in option and quantify improvements, we need to state the source or reference for this. Otherwise stakeholders will challenge us, that our assumptions are not documented properly.

Mr. Würz (VDW): It has to be generalized and it has to be done by the writers by using footnotes.

Mr. Schischke (Fraunhofer IZM): Agreed.

Mr. Eifel (EC): I agree that there is a balance needed to describe what is commercially available. You need to find that balance and you need to relate technologies to certain products, otherwise questions about the origin will come up. It should not look like a promotion of the product. Footnote and annex solutions might be both good. Stakeholders from other countries are also encouraged to promote non-German solutions.

16:00 /16:44 Stakeholder Questionnaire: Assessment Matrix – Preparation Task 6
K. Schischke / J. König

Assessment matrix is available at:
http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/ImprovementMatrix_2nd%20StakeholderMeeting.pdf

Mr. Hagemann (VDW): Is that the questionnaire as it will be kept up?

Mr. Schischke (Fraunhofer IZM): Yes.

Ms. Garczynska (CECIMO): When is the questionnaire due?

Mr. Schischke (Fraunhofer IZM): May 2nd is stated in the questionnaire. If you cannot make it by May 2nd, please let me know.

16:15 / 16:55 Next Steps ***K. Schischke***

Presentation is posted at:
http://www.ecomachinetools.eu/typo/meetings.html?file=tl_files/pdf/NextSteps_2nd%20Stakeholdermeeting.pdf

Ms. Garczynska (CECIMO): When is the final report coming up? The next stakeholder meeting will be in January, but the report is due not before March.

Mr. Schischke (Fraunhofer IZM): The final report is due in March. After the stakeholder meeting, time is needed to incorporate the comments from the last meeting. Also it has to be approved by the EC.

Ms. Garczynska (CECIMO): Concerning task 3: Power consumption. Why is noise and energy consumption going with the same methodology?

Mr. König (Fraunhofer): The idea is that measurement by the use of an exemplary workpiece as in noise measurement can be transferred to the energy consumption methodology.

Mr. Würz (VDW): In the study it is also commented to use ISO 8525 for energy consumption. There you are testing against a certain threshold. For energy consumption, there is no threshold, so it is not feasible to make the comparison with that ISO.

Mr. Eifel (EC): If the use pattern is reflecting reality, should it not be fine to use that use pattern for measuring energy consumption measurements to?

Mr. Würz (VDW): Noise levels have to meet a certain threshold, e.g. given by the machinery directive. But you can't say you have to be below under a certain energy use. Results will be different, depending whether small or big machines are tested. This is not comparable at all.

Mr. König (Fraunhofer): The interesting thing behind is that in different modes, the features of a machine tool can be analyzed. That is the only comparison with ISO 8525 and the idea of comparing different modes of energy consumption.

Mr. Schischke (Fraunhofer IZM): We shift it to the standard section and mention which standards address noise emission levels.

Ms. Garczynska (CECIMO): It should not be the target to provide a methodology for energy consumption measurement.

Mr. Eifel (EC): For possible ecodesign requirements, we need a common language, which means common measurements. The consultants should identify existing standards and methods and gaps in task 1 and then the need for standards and measurements methods in task 7. It seemed like a good attempt trying to find transferable machinery use patterns which could be used in other measurement methods in the absence of standards. If not correct, stakeholders are free to come up with a better solution, ideally in standardisation. Also, these gaps have been indicated in the draft horizontal Ecodesign mandate that is discsussed with CEN and Cenelec.

Mr. Würz (VDW): There is an ongoing standardization work trying to find this common language for metal cutting and metal forming. There is no gap in standardization, as

the first draft is posted. The experience of people attending in standardisation should be considered and they should be heard. This issue should be left to the people who actually deal with standardization.

Mr. Eifel (EC): The ongoing development of standards is very welcome, but as long as there is no adopted EN standard, there is a gap that has been identified. If adequate standards do not exist or are not developed, consultants should attempt to define the necessary methods, as has been done in some preparatory studies for other product groups. Of course, stakeholders need to verify that methods are correct.

Mr. Dürer (VDMA): How should we handle comments?

Mr. Schischke (Fraunhofer IZM): We make it as we did it the first time. Firstly, we take minutes. Secondly, I would like people to submit comments in writing, hence a more efficient and analytical incorporation is possible. There might be a couple of easy-to-solve comments; others might need to be worked out more in detail. Published comments will come later, prior to the next Stakeholder Meeting. For detailed input, e.g. why certain approaches were applied, there is also the chance of bilateral discussions.

17:30 Closing Remarks ***K. Schischke***

End: 17:35.